We claim:

1.   A method for re-initializing long running objects while simultaneously maintaining the access of reference applications to the objects during the re-initialization process comprising the steps of:

5   registering an object with an object manager;

           receiving a re-initialization signal to refresh information contained in an object;

           notifying the particular object for which the re-initialization signal was sent; and

           identifying all references that have access to the object at the time of the re-initialization signal;

10   performing the object re-initialization; and

           notifying the object manager at the completion of the re-initialization process.

2.   The method as described in claim 1 wherein the object is a long running object.

15   3.   The method as described in claim 1 wherein said registering step further comprises:

           receiving at an object manager, a registration request from an object;

           obtaining information concerning the re-initialization interval for that object; and

           listing that object and the re-initialization information in the object manager.

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4.   The method as described in claim 1 wherein a re-initialization signal could originate from an external source or from the object manager.

5.   The method as described in claim 1 wherein said object identification step further

25   comprises the step of identifying object programs that are connected to the particular object program that is to be re-initialized and determining whether each identified object program needs to be re-initialized.

6.   The method as described in claim 5 further comprising the step of placing each identified reference connected to the object program to be re-initialized in a hold state during the re-initialization process, the hold state providing the capability to maintain the connection of the references to the object program.

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7.   The method as described in claim 1 further comprising the step of obtaining the current status at the object manager of an object program for which the object manager has control.

10   8.   The method as described in claim 7 wherein said current status comprises the of processing, waiting, stopping, restarting and running.

9.   A computer program product in a computer readable medium for re-initializing long running objects while simultaneously maintaining the access of reference

15   applications to the objects during the re-initialization process comprising:

       instructions for registering an object with an object manager;

       instructions for receiving a re-initialization signal to refresh information contained in an object;

       instructions for notifying the particular object for which the re-initialization signal

20   was sent; and

       instructions for identifying all references that have access to the object at the time of the re-initialization signal;

       instructions for performing the object re-initialization; and

       instructions for notifying the object manager at the completion of the re-

25   initialization process.

10.   The computer program product as described in claim 9 wherein said registering instructions further comprise:

instructions for receiving at an object manager, a registration request from an object;

5   instructions for obtaining information concerning the re-initialization interval for that object; and

instructions for listing that object and the re-initialization information in the object manager.

10   11.   The computer program product as described in claim 9 further comprises instructions for identifying object programs that are connected to the particular object program that is to be re-initialized and instructions for determining whether each identified object program needs to be re-initialized.

15   12.   The computer program product as described in claim 11 further comprising instructions for placing each identified reference connected to the object program to be re-initialized in a hold status during the re-initialization process, the hold status providing the capability to maintain the connection of the references to the object program.

20   13.   The computer program product as described in claim 9 further comprising instructions for obtaining the current status at the object manager of an object for which the object manager has control.

14.   A method for managing the re-initialization of long running objects while simultaneously maintaining the access of reference applications to the objects during the re-initialization process comprising the steps of:

registering an object program with an object manager;

5   monitoring the object programs registered with the object manager ;

notifying a particular object program of a re-initialization signal received at the object manger, the signal indicating the need for the object program begin re-initialization procedures;

identifying references that are connected to the object at the time of the receipt of

10   the re-initialization signal;

placing the identified references in a hold state during the re-initialization process; and

receiving a completion status at the object manager at the completion of the object program re-initialization.

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15.   The method as described in claim 14 further comprising the step of releasing the references programs from the hold state at the completion of the object program re-initialization.

20   16.   The method as described in claim 14 wherein said registering step further comprises:

receiving at an object manager, a registration request from an object;

obtaining information concerning the re-initialization interval for that object; and

listing that object and the re-initialization information in the object manager.

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17.   The method as described in claim 14 wherein said object identification step further comprises the step of identifying object programs that are connected to the particular object program that is to be re-initialized and determining whether each identified object program needs to be re-initialized.

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18.   The method as described in claim 17 further comprising the step of placing each identified reference connected to the object program to be re-initialized in a hold state during the re-initialization process, the hold state providing the capability to maintain the connection of the references to the object program.

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19.   The method as described in claim 14 further comprising the step of obtaining the current status at the object manager of an object program for which the object manager has control.

10   20.   The method as described in claim 19 wherein said current status comprises the of processing, waiting, stopping, restarting and running.

21.   The method as described in claim 20 wherein the object manager prevents new reference programs from accessing a registered object program when the object manager 15   detects a "wait" status from the object program.

22.   A computer program product in a computer readable medium for managing the re-initialization of long running objects while simultaneously maintaining the access of reference applications to the objects during the re-initialization process comprising:

20   instructions for registering an object program with an object manager;

            instructions for monitoring the object programs registered with the object manager;

            instructions for notifying a particular object program of a re-initialization signal received at the object manger, the signal indicating the need for the object program begin 25   re-initialization procedures;

            instructions for identifying references that are connected to the object at the time of the receipt of the re-initialization signal;

            instructions for placing the identified references in a hold state during the re-initialization process; and

30   instructions for receiving a completion status at the object manager at the completion of the object program re-initialization.

23.   The computer program product as described in claim 22 further comprising instructions for releasing the references programs from the hold state at the completion of the object program re-initialization.

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24.   The computer program product as described in claim 22 wherein said registering instructions further comprise:

    instructions for receiving at an object manager, a registration request from an object;

10   instructions for obtaining information concerning the re-initialization interval for that object; and

    instructions for listing that object and the re-initialization information in the object manager.

15   25.   The computer program product as described in claim 22 wherein said object identification instructions further comprise instructions for identifying object programs that are connected to the particular object program that is to be re-initialized and determining whether each identified object program needs to be re-initialized.

20   26.   The computer program product as described in claim 25 further comprising instructions for placing each identified reference connected to the object program to be re-initialized in a hold state during the re-initialization process, the hold state providing the capability to maintain the connection of the references to the object program.

25   27.   The computer program product as described in claim 22 further comprising instructions for obtaining the current status at the object manager of an object program for which the object manager has control.

28.   The computer program product as described in claim 27 further comprising instructions for the object manager prevent new reference programs from accessing a registered object program when the object manager detects a "wait" status from the registered object program.

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29.   A system for re-initializing long running objects while simultaneously maintaining the access of reference applications to the objects during the re-initialization process comprising:

an object manager for controlling the re-initialization of the object, said object
10   manager containing information related to the periodic internals at which an object registered with said object manager is to be re-initialized;

an object program containing information for access by users, said object being registered with the object manager;

an object status program contained in said object to facilitate communication
15   between the object manager and the object, said status program capable for notifying the object manager of the status of the object and capable of limiting access of reference applications to the object program during a re-initialization process of the object.

30.   The system as described in claim 29 wherein said object status program further
20   comprises the ability to maintain the access of reference programs to an object during the re-initialization of the object.

31.   The system as described in claim 30 wherein said object status comprises the of processing, waiting, stopping, restarting and running.

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